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NDIA NATIONAL DEFENSE INDUSTRIAL ASSOCIATION

August 2003

"Creating the Competitive Edge: Integrating & Measuring Maturity of Processes"

presented by Donett Murphy

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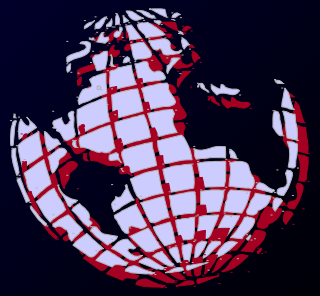
Creating the Competitive Edge: Integrating & Measuring Maturity of Process

OVERVIEW

- Competitive Edge Discriminators The New Waves
- Creating and Managing the Completive Edge
- CM & DM Professionals Shaping Your Tomorrow TODAY



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Competitive Edge Discriminators - the New Waves

In many industries the definition of value has shifted in this down turn economy.

What's Out	What's In
First-mover advantage	First-prover advantage
Revenue growth at all costs	Positive cash flow
Progress	Accountability
Revolutionary offers	Evolutionary offers
Market breadth	Market depth
Strategic partners	Value-chain partners
Strategic partners	Value-chain partners
Vendor-centric product focus	Customer-centric product focus
Constraint driven procurements	Performance driven procurements

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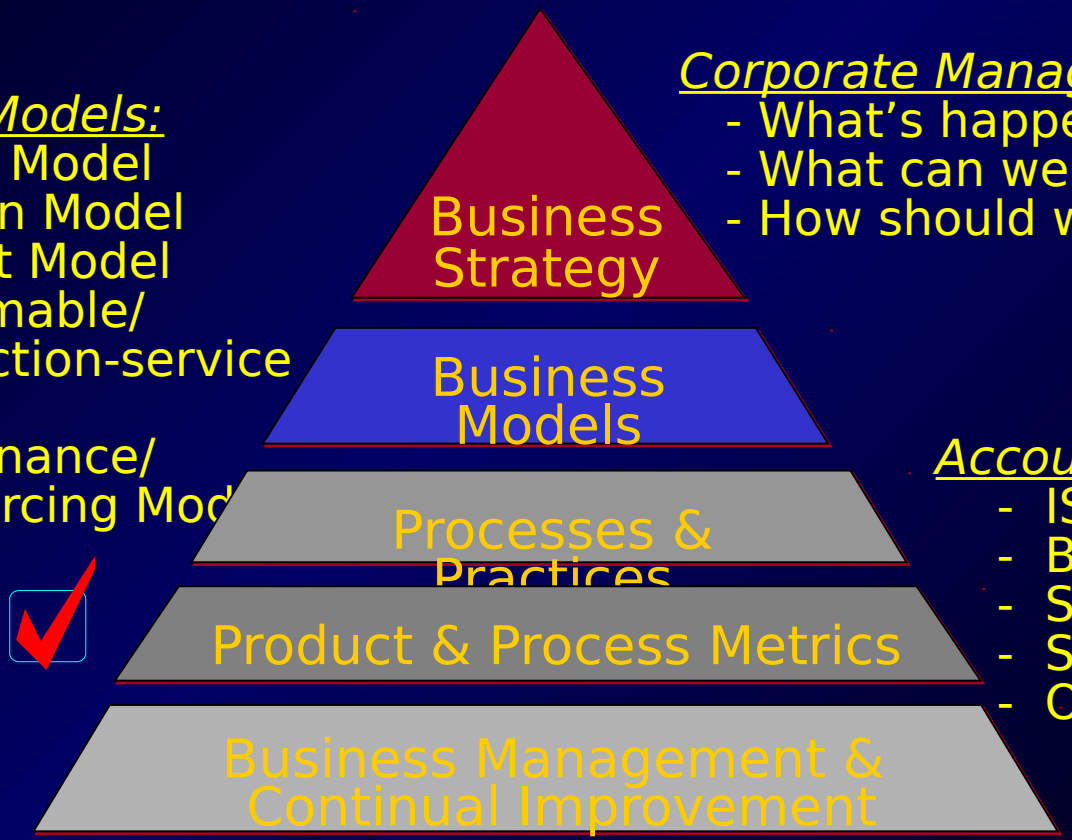
Creating & Managing the Competitive Edge

Business Models:
- Project Model
- Solution Model
- Product Model
- Consumable/ Transaction-service Model
- Maintenance/ Outsourcing Mod



Corporate Management Questions
- What's happening now?
- What can we do about it?
- How should we do it?

Accountable Standards:
- ISO 9000
- Balanced Scorecard
- SEI/CMMI
- Six Sigma
- Others

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Processes & Practices Accountability Standards

- Increase productivity and effectiveness.
- Define consistent terminology.
- Identify common process assets.
- Target common improvement goals.
- Promote coordination and synergy.
- Define who has authority and responsibility.

Examples:
- ISO 9000
- Balanced Scorecard
- SEI/CMMI
- Six Sigma

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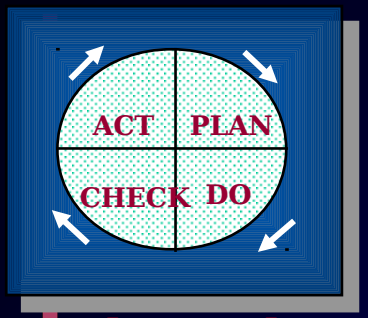
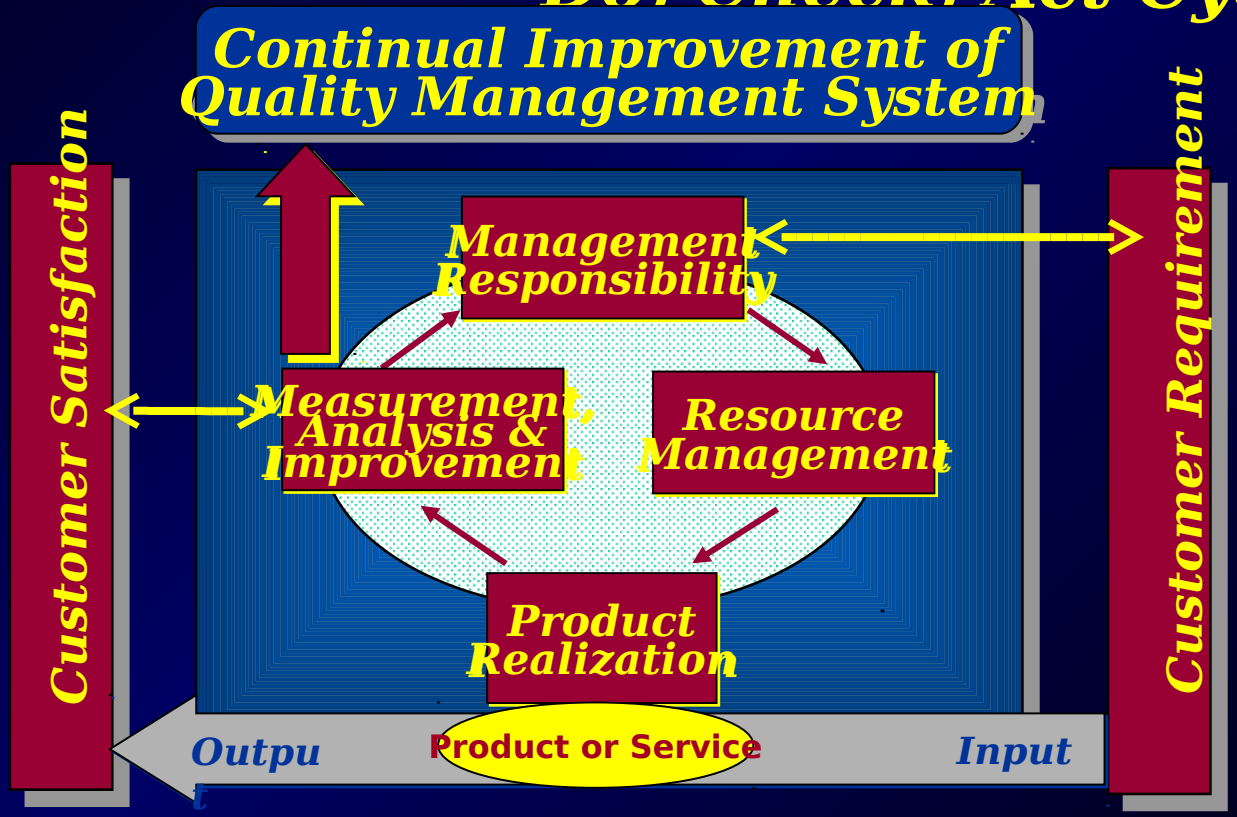
ISO 9000:2000 Application of Plan, Do, Check, Act Cycle



Sheward Cycle



PLAN - Establish the objectives and processes necessary to deliver results in accordance with customer requirements and the organization's policies.

DO - Implement the processes.

CHECK – Monitor and Measure processes and product against policies, objectives and requirements for the product and report the results.

ACT - Take actions to continually improve process performance.

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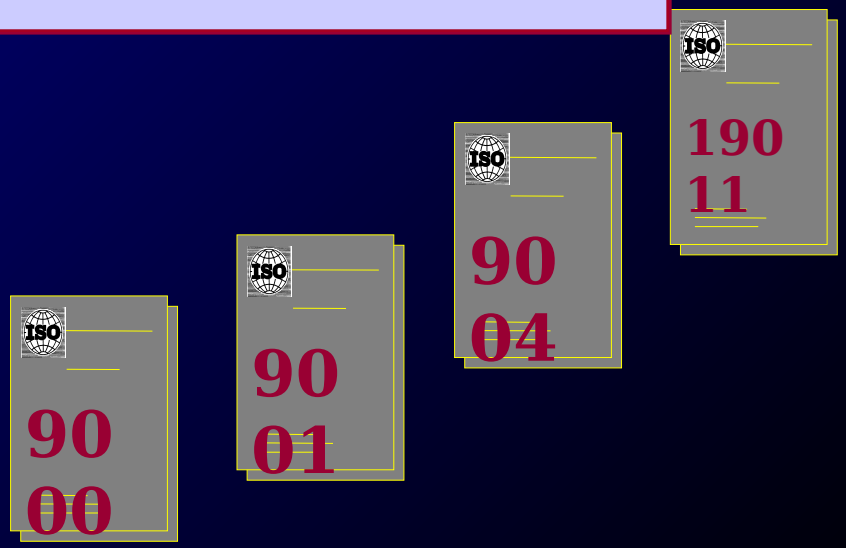
ISO 9000:2000 Quality Management System

ISO 9000 - QMS - Fundamentals and Vocabulary
ISO 9001 - QMS - Requirements
ISO 9004 - QMS - Guidelines for Performance Improvements
ISO 19011 - Guidelines on Quality and Environmental Auditing



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ISO 9000:2000 Quality Management System

SHALL

ISO 9000 - QMS - Fundamentals and Vocabulary

ISO 9001 - QMS - Requirements

ISO 9004 - QMS - Guidelines for Performance Improvements

ISO 19011 - Guidelines on Quality and Environmental Auditing

Section 1 - Scope
Section 2 - Normative Reference
Section 3 - Terms and Definitions
Section 4 - Quality Management System
Section 5 - Management Responsibility
Section 6 - Resource Management
Section 7 - Product Realization
Section 8 - Measurement, Analysis and Improvement

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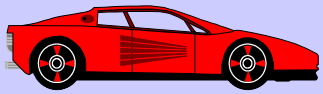
ISO 9000 Standards Relationship to Business Sectors

ISO 9000 Standards

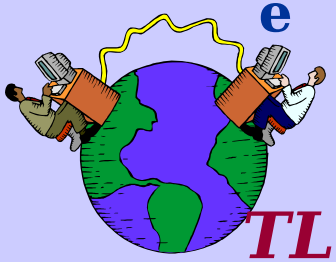
Sector



TS 16949:2002 Automobile

TickIT Software

AS 9100 Aerospace



TL9000 Telecommunication

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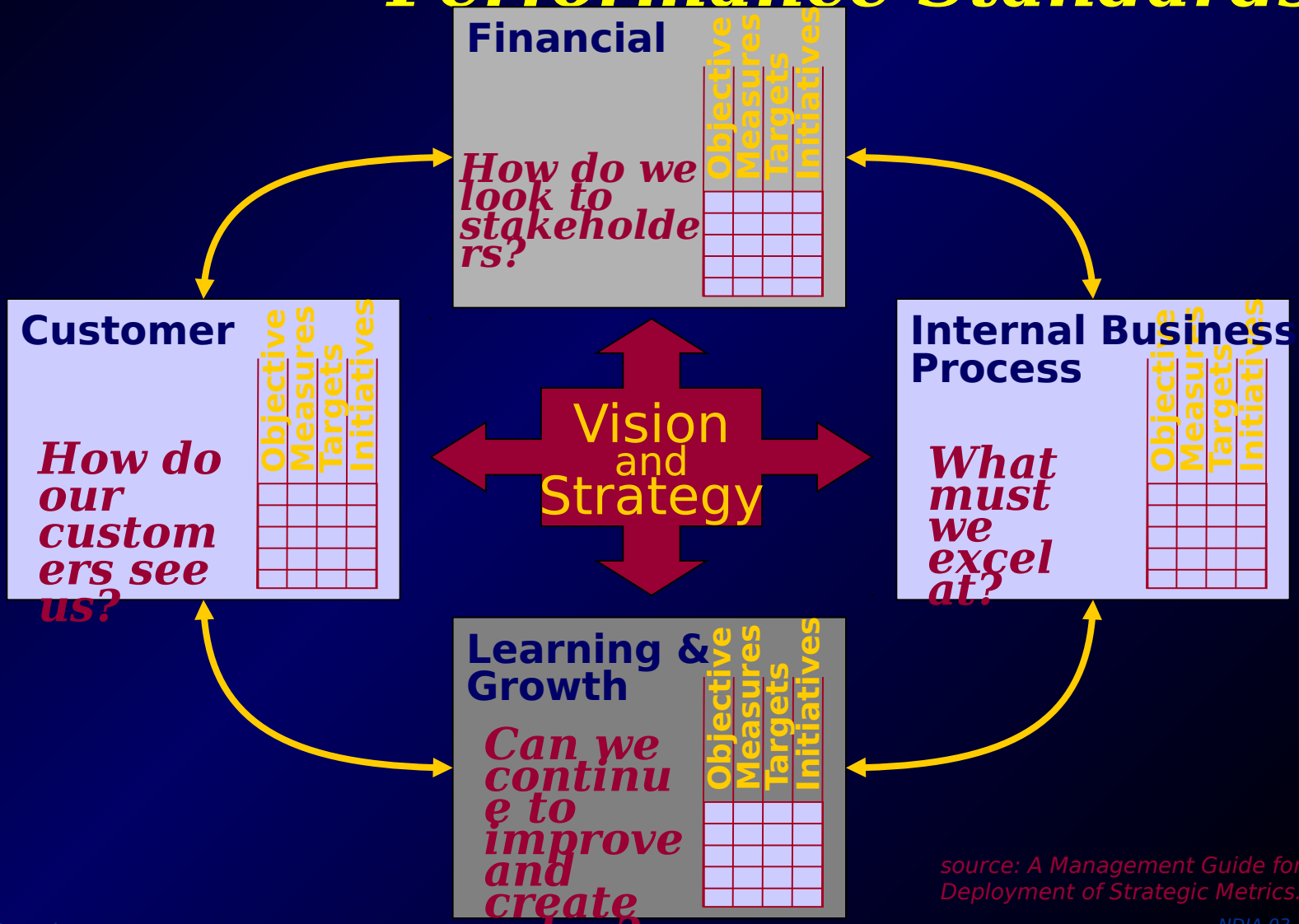
Balanced Scorecard Perspective on Performance Standards



source: A Management Guide for the Deployment of Strategic Metrics.

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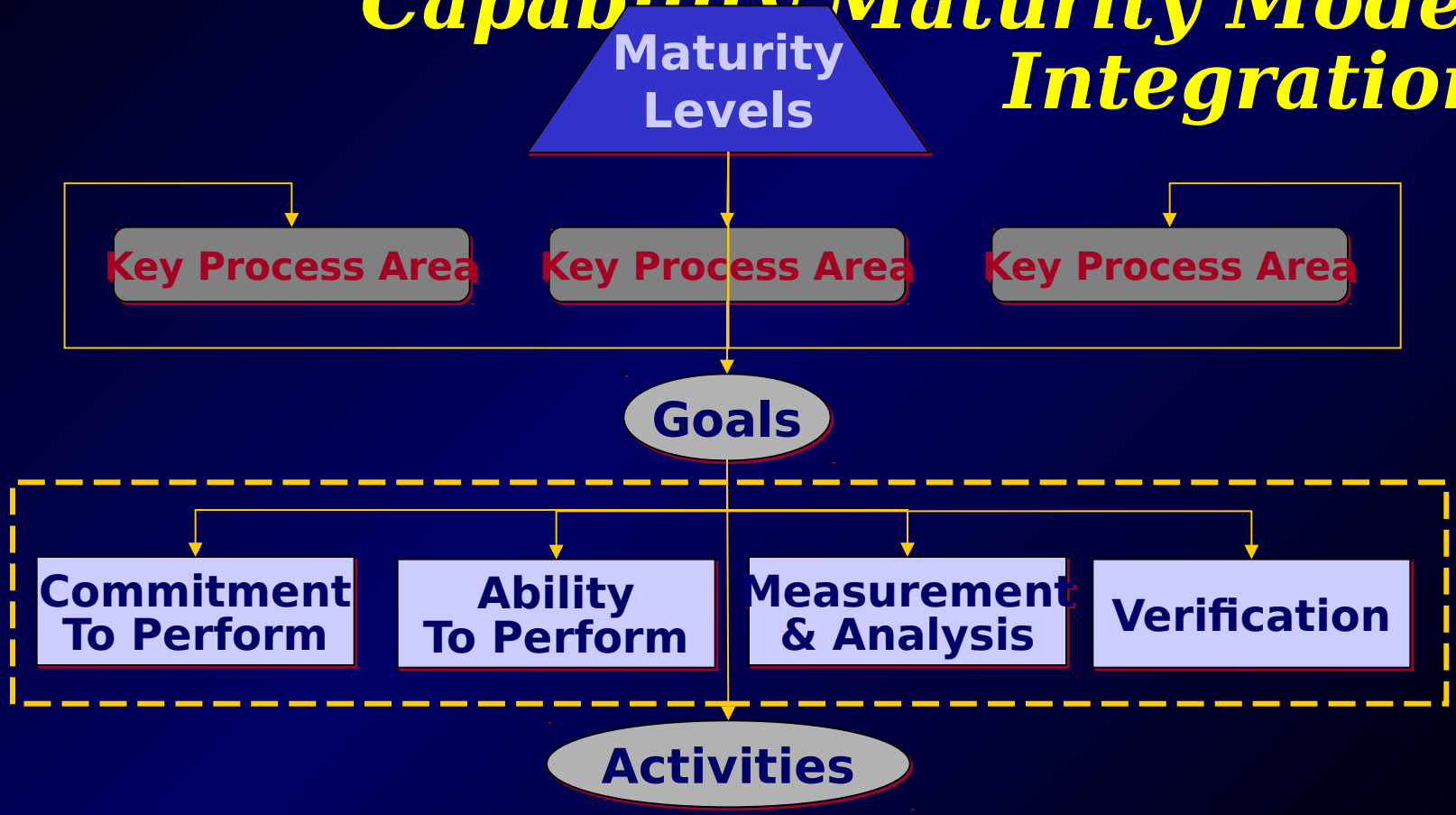
Software Engineering Institute Capability Maturity Model Integration



source: Carnegie Mellon University

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Capability Maturity Model Integration

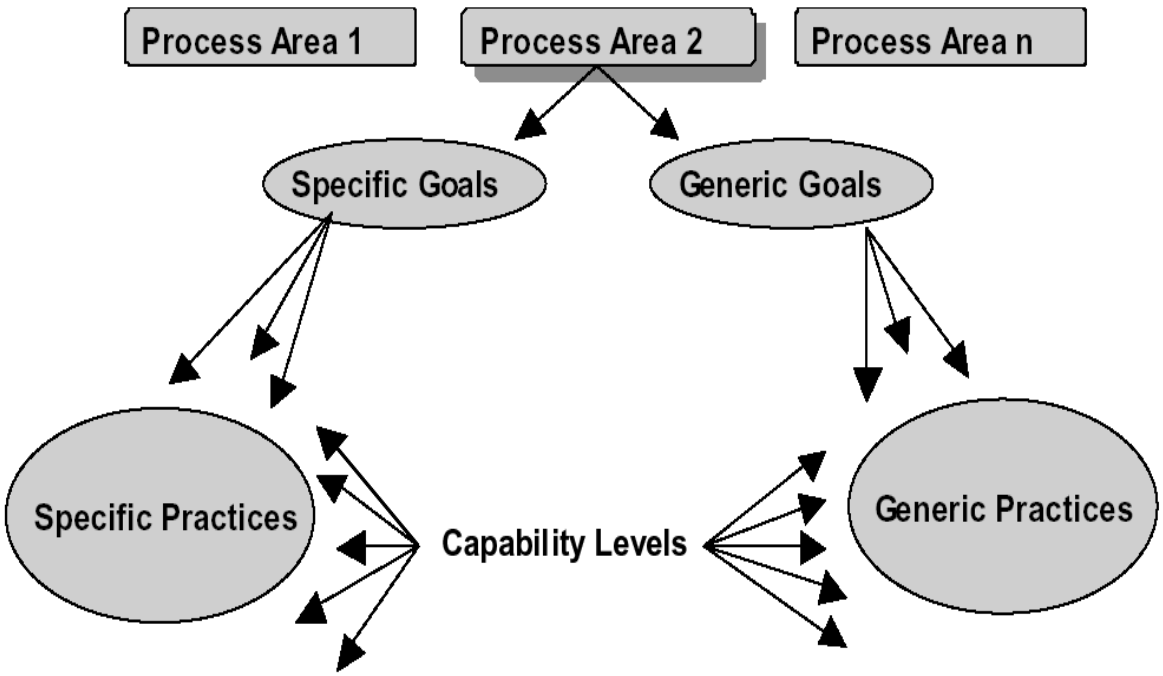

Figure 1: CMMI Model Components [FM103.HDA101.T103]

source: Carnegie Mellon University

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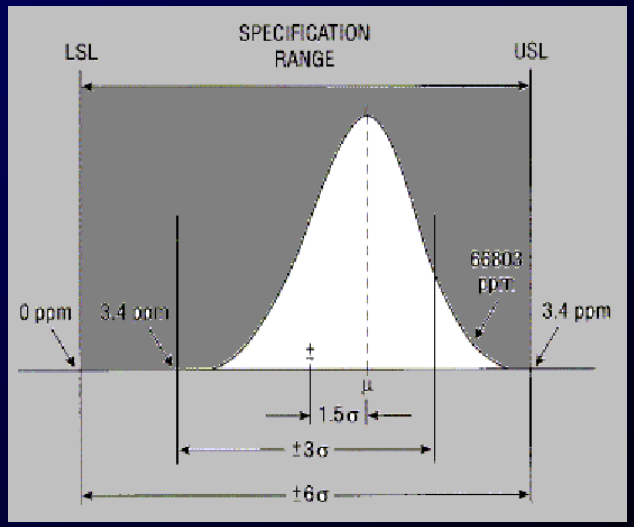
Six Sigma

The goal of Six Sigma is to improve customer satisfaction, and thereby profitability, by reducing and eliminating defects.

Define → Measure → Analyze → Improve → Control

Six Sigma objectives:

- ✓ *Quality is not pursued independent from business goals.*
- ✓ *Time and resources are not spent improving something that is not a lever for improving customer satisfaction.*
- ✓ *Raises the expectation from 3-sigma performance to 6-sigma.*
- ✓ *Does not promote "Zero Defects"*



sources: [Pyzdek 2-01, Marash 99, Harry 00]

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Any change, even a change for the better, is always accompanied by drawbacks and discomforts."

Arnold Bennett

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Product & Process Measurement Rational

- ✓ *Provide* management *visibility into the products & target processes and practices.*
- ✓ *Identify product & process improvement opportunities.*
- ✓ *Help establish problem priorities.*
- ✓ *Provide a basis for orderly improvement efforts.*

source: Carnegie Mellon University

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Metric Management & Control Model

Management Strategic Objectives

OBJECTIVES DEFINITION

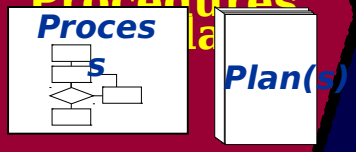
MEASUREMENTS DEFINITION

OBJECTIVE EVIDENCE COLLECTION

RESULTS

Management Decision Making

Process Description(s), Procedures and Plans



Process Description(s), Procedures and Plans

MEASURES

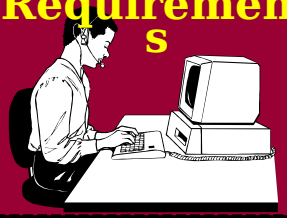
Data Collection Methods

RECORDS

Data Analysis Methods

REPORTS

Product /Services and Requirements



Product /Services and Requirements

MEASURES

IN & OUT

IN & OUT

OUT

IN

OUT

IN

Corrective Action & Continuous Improvement Process

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Model YOUR Process & Set Metric Capture Points

EXAMPLE

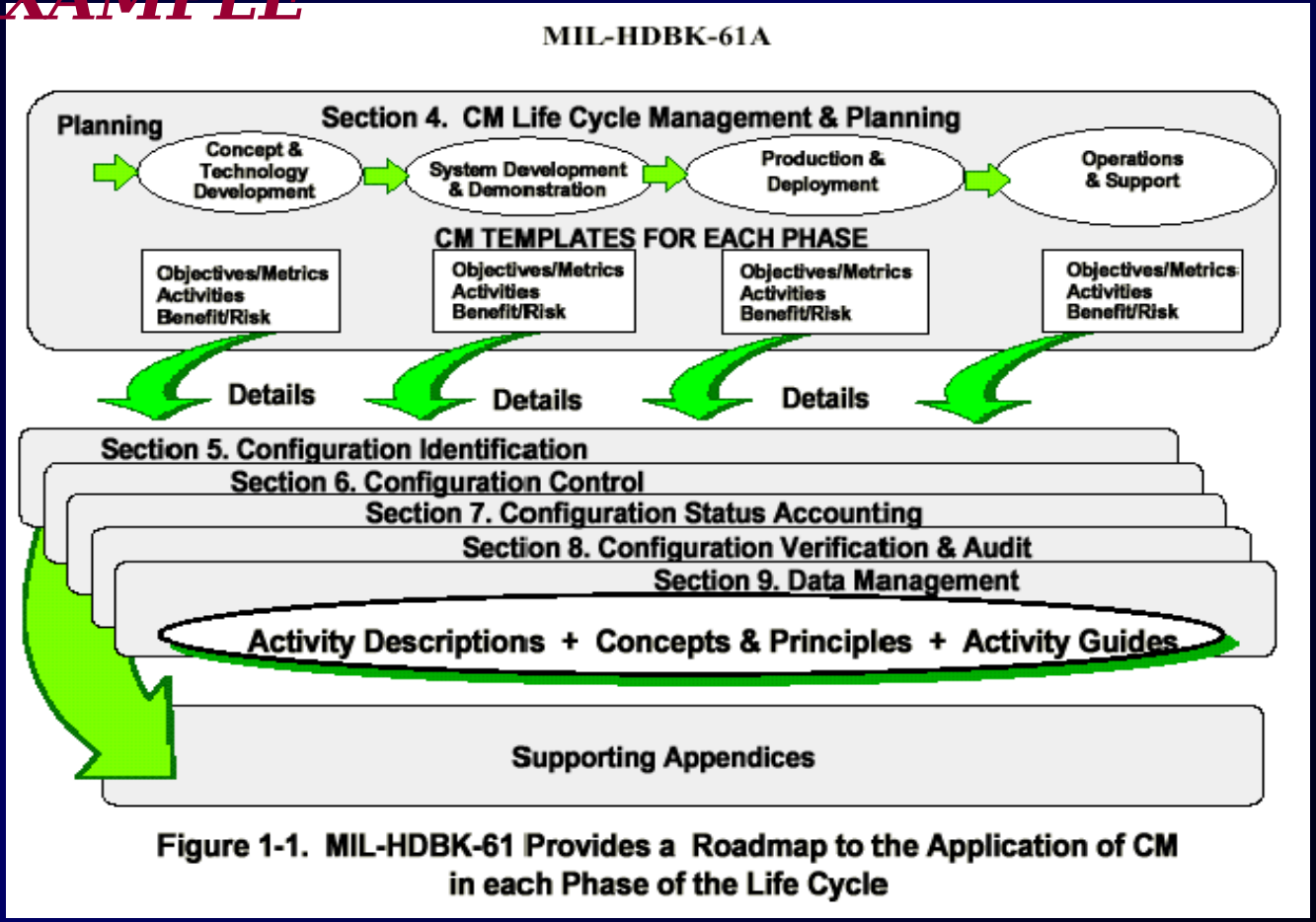

Figure 1-1. MIL-HDBK-61 Provides a Roadmap to the Application of CM in each Phase of the Life Cycle

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CM & DM Professionals Shape Your Tomorrow TODAY

- *Know your organization's target strategic objectives.*
- *Understand, support and implement the models & standards for your industry.*
- *Understand and manage communication challenges within your organization.*
- *Understand, evaluate, document and communicate technology risks.*

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Know Your Target Strategic Objectives

- *Identify what your organization "really" wants to accomplish.*
- *Understand your role.*
- *Determine where you fit in the "big" picture.*
- *Always be on the lookout for opportunities to integrate our disciplines.*

Document and Share Your Ideas

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Understand and Use the Models & Standard

- *Qualify and quantify CM & DM activities using recognized models and standards as baselines.*
- *Identify/create and document cycle models.*
- *Publish/broadcast your understanding.*

Document and Share Your Ideas

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Understand and Manage Communication Challenges

- Create & document target vocabulary.
- Define & validate communication linkages:
  - Company to Customer
  - Company to Partners/Subcontractors
  - Company to Vendors/Suppliers
  - Management to Management
  - Management to Employee
  - Employee to Management
  - Employee to Employee
- Create & document processes & practices.

Document and Share Your Ideas

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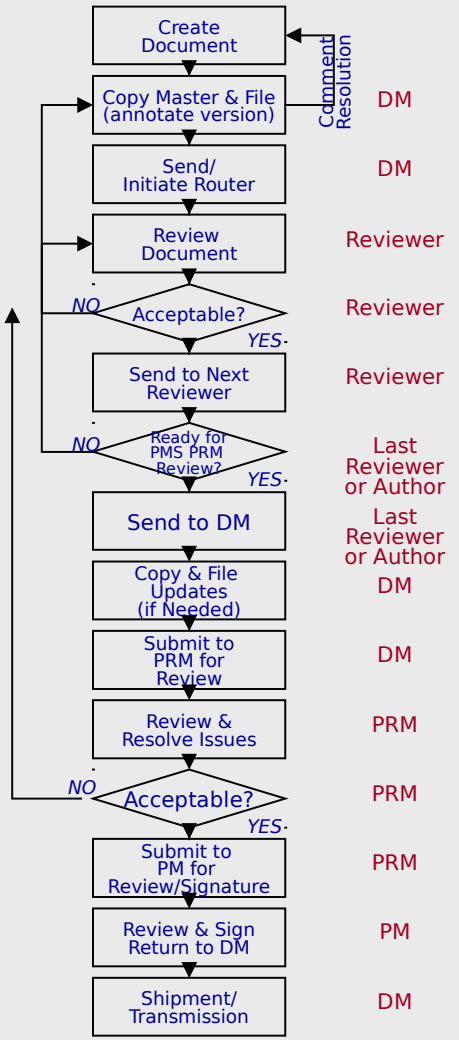
Example– Process Definition

PROCESS FLOWCHART				XXXX
Title: *Document Creation & Review Process*				
Page: *1 of 1*	Rev Date: *8/27/03*	Rev No.: *1.00*		Number: *XXX*



DM –Data Manager
PM – Project Manager
PRM – Program Manager

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Evaluate and Document Technology Risks

- *Understand Collaborative Commerce & E- Commerce challenges, advantages and risks.*
- *Define communication requirements.*
- *Define control requirements.*
- *Collect and solicit users, owners, stakeholders, and management expectations.*

Document and Share Your Ideas

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It is not <u>necessary</u> to <u>change</u>.

urvival is <u>not</u> mandatory.

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CM & DM Professionals

- *Know your personal strategic objectives.*
- *Understand your personal standard and work ethic and act accordingly*
- *Openly communicate & sha*
- *Ensure the technology you use and recommend supports not drives your efforts.*

You are Your Own

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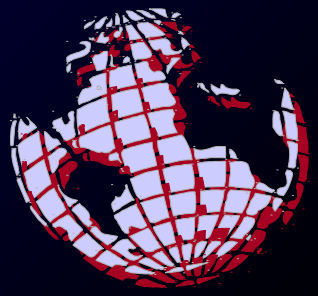
Creating Competitive Edge: Integrating & Measuring Maturity of Process

SUMMARY

- ✓ Competitive Edge Discriminators – The New Waves
- ✓ Creating and Managing the Completive Edge
- ✓ CM & DM Professionals Shaping Your Tomorrow TODAY



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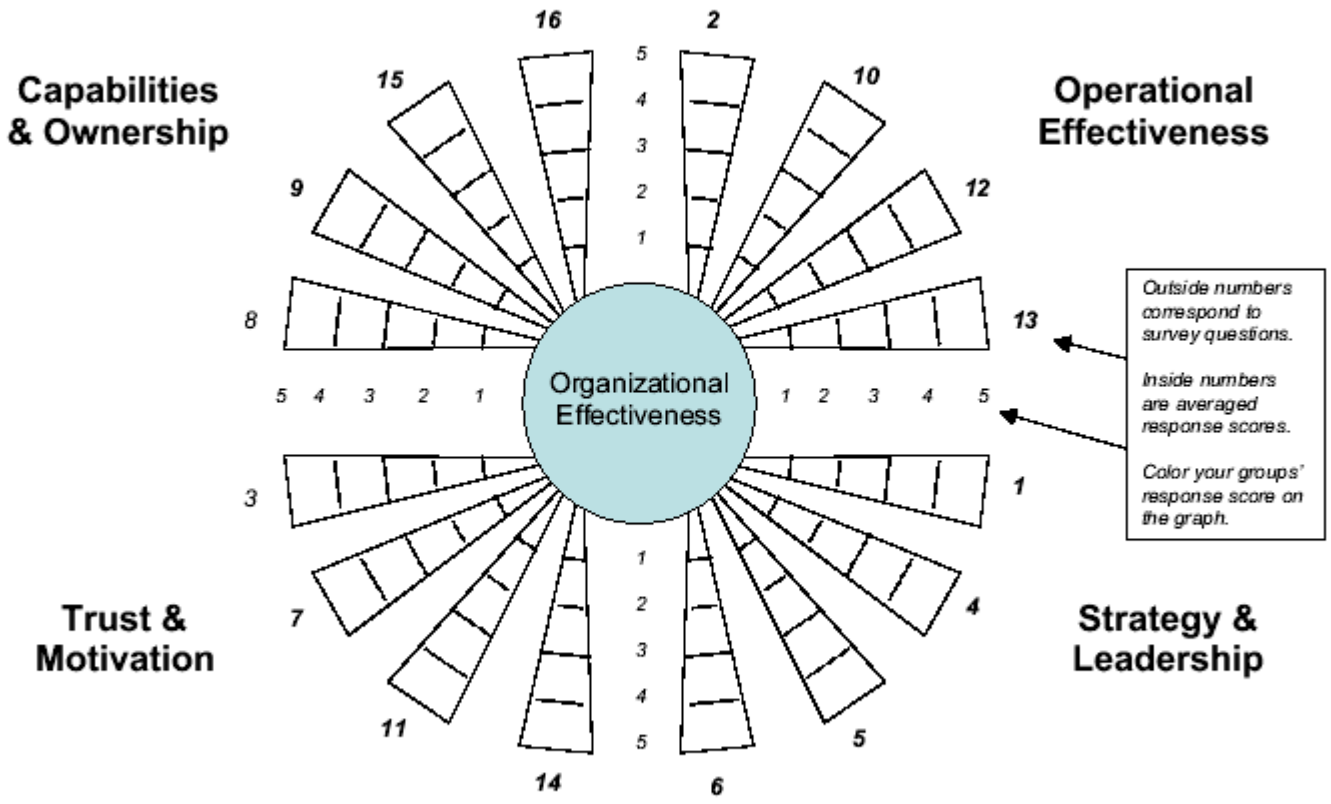
Consider This Self Asses

Organizational Effectiveness Self-Diagnostic Graphic



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Whether You Think You Can Or Can't You Are Right!!!!

I'm know

Donett Murphy
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703-212-7900

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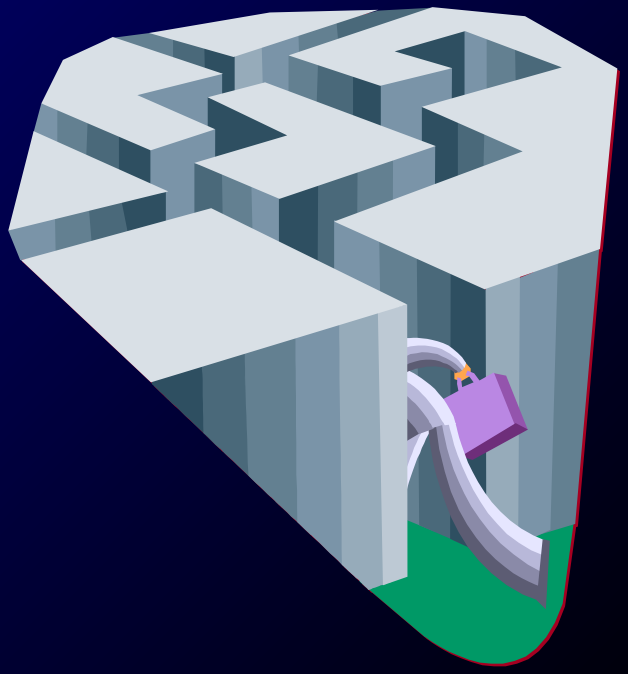
Questions Or Comments



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